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ONLINE DATABASE:WPI

## (54) INSOLE

(57) A shoe insole provides circulated air in a space between an insole 10 and outsole of a shoe. The insole has a number of ventilation holes 11, 11' formed in the surface and the side of the insole, and a number of flexible protruded-parts or ribs formed on the bottom of the said insole to define the space for air circulation.

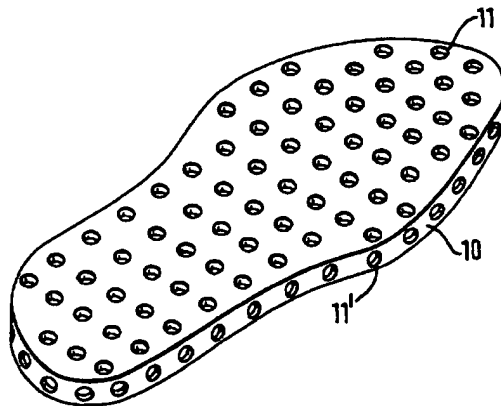


FIG. 1

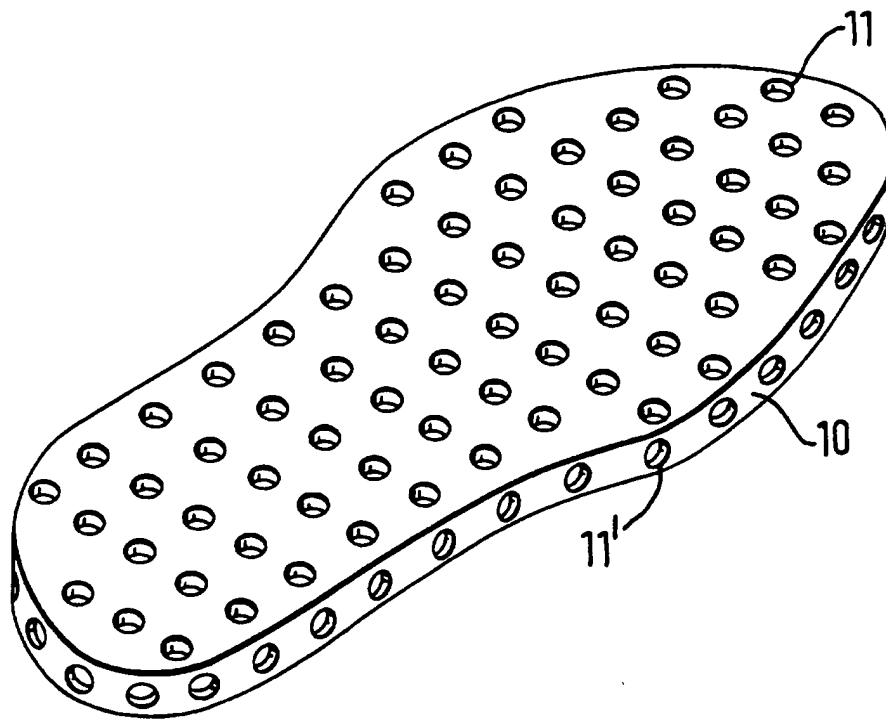


FIG. 1

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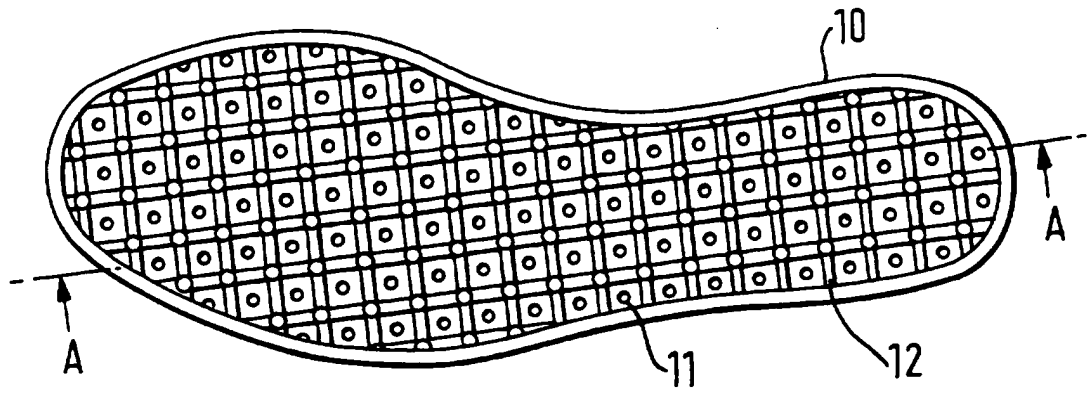


FIG. 2

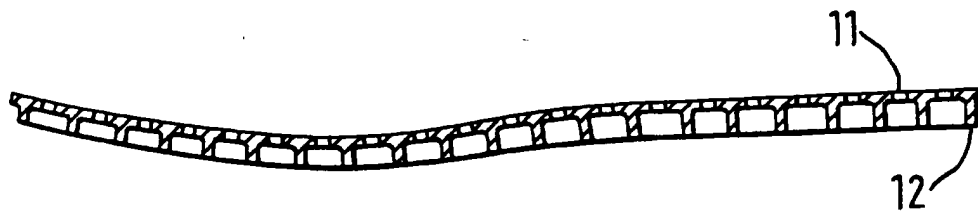


FIG. 3

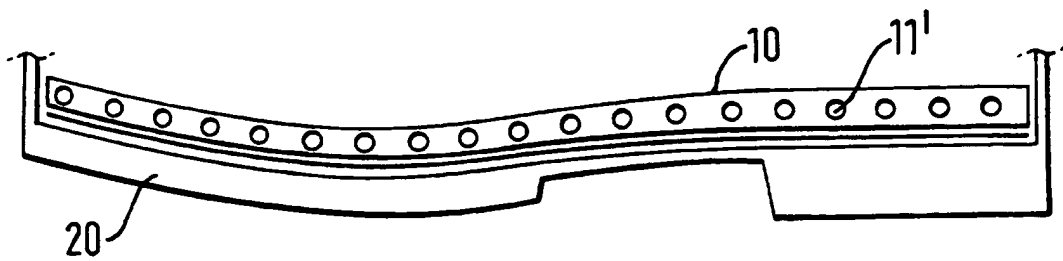


FIG. 4

SHOE-SOLETECHNICAL FIELD

The present invention relates to a shoe-sole inserted in shoes such as leather shoes, athletic shoes or waders.

5 More particularly, the present invention relates to a shoe-sole which provides good air circulation in a space between an insole and outsole of a shoe.

BACKGROUND OF THE INVENTION

10 Generally, when putting on shoes, the inside of shoes can be cut off from the outside air and specifically during the summer time, the poor ventilation of the shoes can give rise of a problem of inducing a bad smell or even a disease.

15 Therefore, to bring about good ventilation of the shoes, and reduce sweat in the shoes or socks, a shoe-sole may be inserted when using shoes. However, known shoe-soles do not surmount the problems mentioned above; sweating is hardly reduced, the inside air can hardly be circulated with the outside air and bad smells remain in the socks  
20 which are wet by sweat. No one can expect the prevention of disease by adopting and using known shoe-soles.

SUMMARY OF THE INVENTION

In its broadest aspect, the invention provides a sole-insole which releases impact of the shoes, and at the same  
25 time ventilates air to the inside of the shoes, thereby

improving the feeling of putting on shoes, and relieving the problems noted above.

According to the invention there is provided an insole for a shoe having

5 a number of ventilation holes formed in the surface and the side thereof; and

a number of flexible protruded-parts formed on the bottom thereof.

10 An embodiment of the invention may improve air circulation as will now be described.

A shoe insole embodying the invention has a number of small ventilation holes in the insoles and forming flexible protruded parts at the bottom of shoe-soles.

#### DESCRIPTION OF EMBODIMENT OF THE INVENTION

15 An embodiment of the invention will now be described by way of example, with reference to the following figures in which:

Fig 1 is a perspective view of the embodiment of the present invention;

20 Fig 2 is a bottom view of the embodiment of the present invention;

Fig 3 is a cross-sectional view taken on the line A-A in Fig 2; and

Fig 4 shows a shoe-sole embodying the present invention in use.

As appears in Fig 1 and Fig 2, the embodiment of the present invention comprises a body of a shoe insole 10  
5 having a number of ventilation holes 11, 11' and a number of protruded parts 12. In the surface and the side of the insole, the ventilation holes 11, 11' are formed, and at the bottom of the insole, the flexible protruded parts 12 are formed.

10 Because the said protruded parts 12 are formed with a flexible quality of a materials, walking with the shoes on becomes much more convenient because of the cushion effect of the shoes. Due to the said protruded parts' 12  
15 contracting and expanding effect, the air can easily be ventilated and automatically circulated alleviating the tiredness of feet and improving the feeling of the putting shoes on.

The operation and effect of the present invention are as follows:

20 As shown in Fig 3 and Fig 4, when the wearer steps on the shoes 20, the insole moves downwards to compressing the air in the space between the protruded parts 12, which is then evacuated from the shoes through the ventilation  
holes 11, 11' in the surface and side of the insole. When  
25 the wearer steps off the shoes, the insole move upwards to clear the pressure in the space between the protruded part 12, drawing air into the shoes through the ventilation holes 11, 11' which are in the surface and side of the insole.

The repetition of aforesaid activities makes it possible to circulate the air and maintain the clean state of the shoes. It removes not only the bad smell inside of the shoes but also alleviates the probability of foot disease.

5 Thus, the embodiment of the present invention is not only a good solution of the air circulation in the shoes through very simple activities, but also a convenient way to remove the foot-moisture inside of shoes, particularly sweat-moisture from the sole of the foot. Through the  
10 present invention we can manage a wholesome life in respect of footwear not only preventing bad smells in feet and footwear but also avoid disease.

Whilst the invention has been described with reference to an insole, it is clear to one skilled in the art that the  
15 insole may be removable, or formed as part of a sole.

CLAIMS

1.           An insole for a shoe having  
            a number of ventilation holes formed in the surface  
and the side thereof; and  
5           a number of flexible protruded-parts formed on the  
bottom thereof.
2.           An insole according to claim 1, wherein the  
protruded parts define air spaces.
3.           An insole according to claim 2, wherein the  
10          protruded parts deform as pressure is applied and released  
by the users foot when walking to contract and expand the  
air spaces to circulate air within a shoe.
4.           An insole according to claim 2 or 3, wherein  
the ventilation holes communicate with the air spaces  
15          defined by the protruded parts.
5.           A shoe-sole having an insole according to any  
preceding claim formed integrally therewith.
6.           An insole, substantially as herein described,  
with reference to Figures 1 to 4 of the accompanying  
20          drawings.